

wherein:

PUG is a photographically useful group;

LINK 1 and LINK 2 are linking groups;

TIME is a timing group;

$l$  is 0 or 1;

$m$  is 0, 1, or 2;

$n$  is 0 or 1;

Y is C, N, O or S;

X is a substituted or unsubstituted aryl group or an electron-withdrawing group;

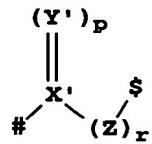
W is hydrogen, halogen, or a substituted or unsubstituted alkyl, cycloalkyl, aryl or heterocyclic group, or W can combine with T or R<sub>12</sub> to form a ring, w is 0 to 3 when Y is C, w is 0-2 when Y is N, and w is 0-1 when Y is O or S, when w is 2, the two W groups can combine to form a ring, and when w is 3, two W groups can combine to form a ring or three W groups can combine to form a bicyclic substituent;

R<sub>12</sub> is hydrogen, or a substituted or unsubstituted alkyl, cycloalkyl, aryl or heterocyclic group or R<sub>12</sub> and T can form a ring;

T is a substituted or unsubstituted alkyl, cycloalkyl, aryl or six-membered heterocyclic group, t is 0, 1, or 2, with the proviso that when X is a cyano or sulfonyl group t is 1 or 2, when t is 2 the two T groups can combine to form a ring;

X is divalent, a is 1 or 2, and b is 1;

where LINK 1 and LINK 2 is independently of Structure II:



## II

wherein

$X'$  represents carbon or sulfur;

$Y'$  represents oxygen, sulfur or  $N-R_1$ , where  $R_1$  is substituted or unsubstituted alkyl or substituted or unsubstituted aryl;

$p$  is 1 or 2;

$Z$  represents carbon, oxygen or sulfur;

$r$  is 0 or 1;

with the proviso that when  $X$  is carbon, both  $p$  and  $r$  are 1, when  $X$  is sulfur,  $Y$  is oxygen,  $p$  is 2 and  $r$  is 0;

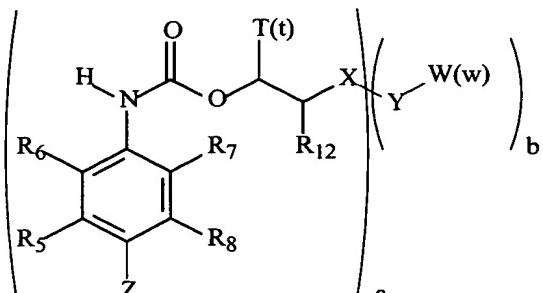
# denotes the bond to PUG (for LINK 1) or TIME (for LINK 2);

\$ denotes the bond to TIME (for LINK 1) or  $T_{(t)}$  substituted carbon (for LINK 2);

and

wherein PUG is a development inhibitor, bleach accelerator, bleach inhibitor, inhibitor releasing developer, dye precursor, developing agent, silver ion fixing agent, electron transfer agent, silver halide solvent, silver halide complexing agent, reductone, image toner, pre-processing or post-processing image stabilizer, nucleator, or precursor thereof.

11. (Fifthly Amended) A photographic, photothermographic, or thermographic imaging element comprising an imaging layer having associated therewith a compound of Structure III:



III

wherein:

Z is OH or NR<sub>2</sub>R<sub>3</sub>, where R<sub>2</sub> and R<sub>3</sub> are independently hydrogen or a substituted or unsubstituted alkyl group or R<sub>2</sub> and R<sub>3</sub> are connected to form a ring;

R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub>, and R<sub>8</sub> are independently hydrogen, halogen, hydroxy, amino, alkoxy, carbonamido, sulfonamido, alkylsulfonamido or alkyl, or R<sub>5</sub> can connect with R<sub>3</sub> or R<sub>6</sub> and/or R<sub>8</sub> can connect to R<sub>2</sub> or R<sub>7</sub> to form a ring;

T is a substituted or unsubstituted alkyl cycloalkyl, aryl or six-membered heterocyclic group, t is 0, 1, or 2, with the proviso that when X is a cyano or sulfonyl group, t is 1 or 2, when t is 2, the two T groups can combine to form a ring;

R<sub>12</sub> is hydrogen, or a substituted or unsubstituted alkyl, cycloalkyl, aryl or heterocyclic group or R<sub>12</sub> and T or W can form a ring;

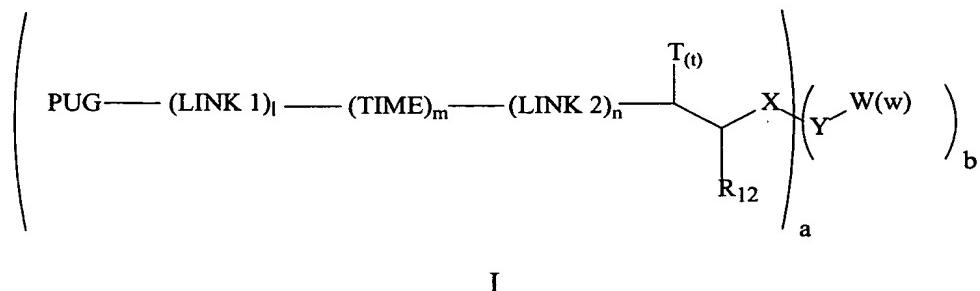
X is a substituted or unsubstituted aryl group or an electron-withdrawing group;

Y is C, N, O or S;

X is divalent, a is 1 or 2, and b is 1;

W is hydrogen, halogen, or a substituted or unsubstituted alkyl, cycloalkyl, aryl or heterocyclic group, or W can combine with T to form a ring, w is 0 to 3 when Y is C, w is 0-2 when Y is N, and w is 0-1 when Y is O or S, when w is 2, the two W groups can combine to form a ring, and when w is 3, two W groups can combine to form a ring or three W groups can combine to form a bicyclic substituent.

42. (Thrice Amended) A photographic, photothermographic, or thermographic imaging element comprising an imaging layer having associated therewith a compound of Structure I:



I

wherein:

PUG is a developing agent;

LINK 1 and LINK 2 are linking groups;

TIME is a timing group;

l is 0 or 1;

m is 0, 1, or 2;

n is 0 or 1;

Y is C, N, O or S;

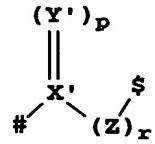
X is a substituted or unsubstituted aryl group or an electron-withdrawing group;

W is hydrogen, halogen, or a substituted or unsubstituted alkyl, cycloalkyl, aryl or heterocyclic group, or W can combine with T or R<sub>12</sub> to form a ring, w is 0 to 3 when Y is C, w is 0-2 when Y is N, and w is 0-1 when Y is O or S, when w is 2, the two W groups can combine to form a ring, and when w is 3, two W groups can combine to form a ring or three W groups can combine to form a bicyclic substituent;

R<sub>12</sub> is hydrogen, or a substituted or unsubstituted alkyl, cycloalkyl, aryl or heterocyclic group or R<sub>12</sub> and T can form a ring;

T is a substituted or unsubstituted alkyl cycloalkyl, aryl or six-membered heterocyclic group, t is 0, 1, or 2, with the proviso that when X is a cyano or sulfonyl group t is 1 or 2, when t is 2 the two T groups can combine to form a ring;

X is divalent, a is 1 or 2, and b is 1;  
where LINK 1 and LINK 2 is independently of Structure II:



II

wherein

X represents carbon or sulfur;

Y represents oxygen, sulfur or N-R<sub>1</sub>, where R<sub>1</sub> is substituted or unsubstituted alkyl or substituted or unsubstituted aryl;

p is 1 or 2;

Z represents carbon, oxygen or sulfur;

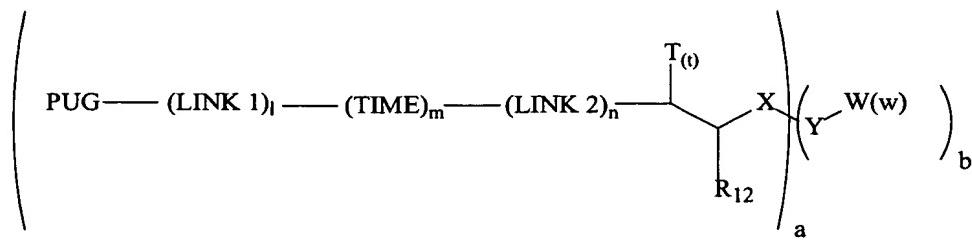
r is 0 or 1;

with the proviso that when X is carbon, both p and r are 1, when X is sulfur, Y is oxygen, p is 2 and r is 0;

# denotes the bond to PUG (for LINK 1) or TIME (for LINK 2);

\$ denotes the bond to TIME (for LINK 1) or T<sub>(t)</sub> substituted carbon (for LINK 2). --

46. A photographic, photothermographic, or thermographic imaging element comprising an imaging layer having associated therewith a compound of Structure I:



I

wherein:

PUG is a developing agent;

LINK 1 and LINK 2 are linking groups;

TIME is a timing group;

l is 0 or 1;

m is 0, 1, or 2;

n is 0 or 1;

Y is C, N, O or S;

X is a substituted or unsubstituted aryl group or an electron-withdrawing group;

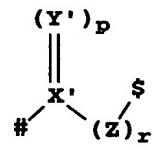
W is hydrogen, halogen, or a substituted or unsubstituted alkyl, cycloalkyl, aryl or heterocyclic group, or W can combine with T or R<sub>12</sub> to form a ring, w is 0 to 3 when Y is C, w is 0-2 when Y is N, and w is 0-1 when Y is O or S, when w is 2, the two W groups can combine to form a ring, and when w is 3, two W groups can combine to form a ring or three W groups can combine to form a bicyclic substituent;

R<sub>12</sub> is hydrogen, or a substituted or unsubstituted alkyl, cycloalkyl, aryl or heterocyclic group or R<sub>12</sub> and T can form a ring;

T is a substituted or unsubstituted alkyl cycloalkyl, aryl or six-membered heterocyclic group, t is 0, 1, or 2, with the proviso that when X is a cyano or sulfonyl group t is 1 or 2, when t is 2 the two T groups can combine to form a ring;

X is divalent, a is 2, and b is 1;

where LINK 1 and LINK 2 is independently of Structure II:



II

wherein

X represents carbon or sulfur;

Y represents oxygen, sulfur or N-R<sub>1</sub>, where R<sub>1</sub> is substituted or unsubstituted alkyl or substituted or unsubstituted aryl;

p is 1 or 2;

Z represents carbon, oxygen or sulfur;

r is 0 or 1;

with the proviso that when X is carbon, both p and r are 1, when X is sulfur, Y is oxygen, p is 2 and r is 0;

# denotes the bond to PUG (for LINK 1) or TIME (for LINK 2);

\$ denotes the bond to TIME (for LINK 1) or T<sub>(t)</sub> substituted carbon (for LINK 2). --